

CLAIMS

WE CLAIM:

1. A fire resistant vision panel for assembly in an opening passing through a door, the vision panel comprising:
 - a first and second flange unit sized to frame the opening and abut a front and rear face of the door;
 - 5 sash elements adapted to extend into the opening from each of the first and second flange units to capture a transparent pane therebetween within the opening;
 - at least one retention member attached to the first flange unit and extending into the opening to grip a sill surface of the opening thereby to retain the first flange unit and its sash element in position for assembly; and
 - 10 at least one fastener adapted to draw the first and second flange units and the sash elements together against the pane.
2. The vision panel of claim 1 wherein the retention member has a hole at its inner end and wherein the retention member includes a nail passing through the hole into a core material of a sill surface of the opening to retain the retention member in the opening.
3. The vision panel of claim 1 wherein the fastener is a threaded fastener and wherein second flange unit includes at least one hole for receiving the threaded fastener therethrough and wherein the retention member further includes a socket threadably receiving an end of the threaded fastener after it has passed through the
5 hole.
4. The vision panel of claim 3 wherein the socket is attached to the retention member by a spring element allowing movement of the socket toward the second flange unit against a spring bias force.
5. The vision panel of claim 4 wherein the spring element is a cantilevered tab extending across an axis of the threaded fastener to flex with increased engagement of the threaded fastener.

6. The vision panel of claim 3 wherein the threaded fastener includes a non-threaded section limiting an engagement of the threaded fastener with the socket.

7. The vision panel of claim 1 wherein the opening is generally rectangular having four pairwise opposed sill surfaces and wherein the vision panel includes four retention members attached to the first flange unit and extending into the opening to grip each of the respective four sill surfaces.

8. The vision panel of claim 1 wherein the sash elements include inwardly biased sharp edge portions in contact with said pane wherein said sharp edge portions will embed in said pane when said pane becomes semi-molten in a fire.

9. The vision panel of claim 1 wherein a surface of the retention member support edges of the pane.

10. The vision panel of claim 1 wherein said flange units are comprised of straight segments joined at corners by a weld-type fastening.

✓ 11. A fire resistant vision panel for assembly in an opening through a door, the vision panel comprising:

a first and second flange unit sized to frame the opening and abut front and rear faces of the door;

5 sash elements adapted to extend into the opening from each of the first and second flange units to hold a transparent pane therebetween within the opening;

at least one spring member attached to the first flange unit and extending into the opening to support a threaded socket spring-biased toward the first flange unit along a direction through the opening; and

10 a threaded fastener adapted to engage the second flange unit and the threaded socket to draw the first and second flange units and the sash elements together against the pane.

12. The vision panel of claim 11 wherein the threaded fastener includes a non-threaded section limiting a depth of engagement of the threaded fastener with

the threaded socket by drawing a threaded portion of the threaded socket over the non-threaded section.

13. The vision panel of claim 12 wherein the limited depth of engagement provides a predetermined compressive force of the sash elements against the pane.

14. The vision panel of claim 11 wherein threaded socket is attached to a cantilevered tab of a member attached to the first flange unit and extending into the opening, wherein the tab extends across an axis following a length of the threaded fastener to flex with increased engagement of the threaded fastener.

15. The vision panel of claim 14 wherein the threaded fastener includes a non-threaded section and the depth of engagement of the threaded fastener with the threaded socket is limited by a bending of the tab causing a drawing of a threaded portion of the threaded socket over the non-threaded section

16. The vision panel of claim 15 wherein the limited depth of engagement provides a predetermined compressive force of the sash elements against the pane.

17. The vision panel of claim 11 wherein the vision panel includes four retention members attached to the first flange unit and extending into the opening to support separate four threaded sockets.

18. The vision panel of claim 17 wherein the second frame has four holes for receiving threaded fasteners to engage the four threaded sockets.

19. The vision panel of claim 11 wherein the sash elements include inwardly biased sharp edge portions in contact with said panel member wherein said sharp edge portions will embed in said panel member when said panel becomes semi-molten.

20. The vision panel of claim 11 wherein the upper surface of the retention member support the bottom of the transparent pane.